

REMARKS

This application has been carefully reviewed in light of the Office Action dated October 2, 2008. Claims 1 to 31 are pending in the application, of which Claims 1, 11, 16, 25, 30 and 31 are independent. Reconsideration and further examination are respectfully requested.

Claims 1 to 31 were rejected under 35 U.S.C. § 112, first paragraph, for allegedly failing to comply with the written description requirement. Without conceding the correctness of the rejection, Applicants have amended the claims to remove the objected to terminology. Specifically, the claims have been amended to clearly recite that each of the plurality of scenes has mutually disjoint and is managed with no relationship with the other scenes so as to have the single significance level, a single unique identification and a single unique representative frame. This feature of the present invention is clearly supported by Fig.3 and related description thereof, wherein each of a plurality of scenes is managed without using a hierarchical (tree) structure. Instead, a single unique identification ID, which also corresponds to the single significant level and single representative frame, are used. According to this feature of the present invention, merely selecting the displayed representative frame image results in a play back of the corresponding scene having the designated significance level as shown in Fig.5. Accordingly, Applicants respectfully request reconsideration and withdrawal of the rejection.

Claims 1 to 3, 5 to 12, 14 to 17, 19 to 26 and 28 to 31 are rejected under 35 U.S.C. § 103(a) over U.S. Patent No. 5,956,453 (Yaegashi) in view of U.S. Patent No. 5,532,833 (Hong). Claims 4, 13, 18 and 27 are rejected under 35 U.S.C. § 103(a) over Yaegashi and Hong in view of U.S. Patent No. 6,348,929 (Acharya). Reconsideration and withdrawal of this rejection are respectfully requested.

Turning to specific claim language, amended independent Claim 1 is directed to an image processing apparatus. The apparatus comprises a storage device that stores scene information including, at least, data for at least one representative frame extracted from a scene, data for an interval of the scene, and data for a significance level of the scene of each of a plurality of scenes included in a moving picture to be played back, wherein each of the plurality of scenes is mutually disjoint and is managed with no relationship with the other scenes so as to have the single significance level, a single unique identification and the single unique representative frame, a display device that displays an externally designated significance level and extracts, on the basis of the externally designated significance level, images of the representative frames of the plurality of scenes, with each extracted image being extracted from a scene of the plurality of scenes having a significance level equal to or higher than the externally designated significance level from the storage device, in order to concurrently display the extracted images chronologically, a selection device that receives a selection of one of the concurrently-displayed images of the representative frames on the basis of an external designation and a playback control device that controls playback of the scenes corresponding to the images of the representative frames, the playback control device controlling playback so as to play back the scenes corresponding to the selected images of the representative frames when the selection device receives the selection, and change a current scene to be currently played back, to a temporally preceding or subsequent scene having the significance level the same as the externally designated significance level displayed by the display device and being most temporally close to the current scene if the significance level of the current scene is different from the externally designated significance level displayed by the display device.

Amended independent Claim 11 is directed to an image processing apparatus.

The apparatus comprises a storage device that stores scene information including, at least, data for at least one representative frame extracted from a scene, and data for a significance level of the scene of each of a plurality of scenes included in a moving picture to be played back, wherein each of the plurality of scenes is mutually disjoint and is managed with no relationship with the other scenes so as to have the single significance level, a single unique identification and the single unique representative frame, a display control device that controls display so as to display an externally designated significance level and extract, on the basis of the externally designated significance level, images of the representative frames of the plurality of scenes, with each extracted image being extracted from a scene of the plurality of scenes having a significance level greater than or equal to the externally designated significance level from the storage device, in order to concurrently display the extracted images chronologically and a selection device that receives a selection of one of the concurrently-displayed representative frames on the basis of an external designation, wherein the display control device controls to play back the scenes corresponding to the selected images of the representative frames when the selection device receives the selection, and change a current scene to be currently played back, to a temporally preceding or subsequent scene having the significance level the same as the externally designated significance level displayed by the display control device and being most temporally close to the current scene if the significance level of the current scene is different from the externally designated significance level displayed by the display control device.

Applicants respectfully submit that the cited references, namely Yaegashi and Hong, considered either alone or in combination, fail to disclose or suggest all of the features of the image processing apparatuses of Claims 1 and 11. In particular, the cited references, either alone or in combination, fail to disclose or suggest at least the features of controlling the playback of a plurality of scenes so as to change a current scene to be currently played back, to a temporally preceding or subsequent scene having the significance level same as a displayed externally-designated significance level and being most temporally close to the current scene if the significance level of the current scene is different from the displayed externally-designated significance level. This feature of the present invention is clearly supported by Figs.6 and 7 and related description thereof, in particular, by steps S311, S312, S313 and S314 and the description of paragraphs [0079] to [0086] of a publication copy of the present application. In this connection, it should be noted that since the image processing apparatus of the present invention is arranged to manage the plurality of scenes so that each scene has the single significance level and the single unique identification as clearly recited in each of the amended Claims 1 and 11, it is required in accordance with the significance level being changed by an external designation to control playback so as to change the scene to be currently played back to a scene having the changed significance level.

In the Office Action, it is acknowledged that Yaegashi fails to disclose a plurality of scenes that are mutually disjoint and that a display device extracts images, on the basis of the designated significance level, from the storage device and concurrently displays the extracted images chronologically. However, the Office Action relies on Hong as disclosing such a feature. Applicants respectfully disagree with such a characterization of the disclosures of Hong.

Applicants submit that, while Hong does disclose retrieval of a frame sequence to display a representative image thereof (see Hong, Abstract; column 3, lines 29 to 31; column 4, lines 1 to 4; column 5, lines 2 to 45; and column 7, lines 25 to 45) and then discloses that the frame sequences are edited to create a logical frame structure (a tree structure) in which an upper node scene embraces lower node scenes. Referring to Fig.1A of Hong, scenes A11 and A12 are independent of each other, but scene A1 includes the scenes A11 and A12. Similarly, the scene A1 is included in a scene A. In this manner, a tree structure is created so that the whole motion video image (root node R) includes upper node scenes A, B and C. That is, there are provided the following inclusion relationships: $R=A+B+C$, $A=A1+A2+A3$, and $A1=A11+A12$. In this connection, Applicants direct the Examiner's attention to Figs.6A and 6B of Hong, wherein there exists hierarchical relationship between IDs of lower and upper level scenes.

Therefore, Applicants submit that the applied references, namely Yaegashi and Hong, fail to disclose or suggest managing the plurality of scenes using a significance level and representative frames where there is no relationship with the other scenes so as to have the single significance level, a single unique identification and the single unique representative frame, as clearly recited in each of the amended Claims 1 and 11. In this connection, the references also fail to disclose or suggest that if the significance level of the current scene is not the same as the externally-designated significance level to be displayed together the extracted representative frame images, the current scene is changed to a temporally preceding or subsequent scene having the significance level same as the displayed externally-designated significance level and being most temporally close to the current scene, as clearly recited in each of the amended Claims 1 and 11.

In light of the deficiencies of Yaegashi and Hong as discussed above, Applicants submit that amended independent Claims 1 and 11 are now in condition for allowance and respectfully request same.

Independent Claims 16 and 25 are corresponding method claims of independent Claims 1 and 11, respectively, and have been now amended in the same manner as the amended independent Claims 1 and 11. Independent Claims 30 and 31 are corresponding medium claims of independent Claims 1 and 11, respectively, and have been also amended in the same manner as the amended independent claims 1 and 11. Accordingly, Applicants submit that Claims 16, 25, 30 and 31 are also now in condition for allowance and respectfully request same.

The other pending claims in this application are each dependent from the independent claims discussed above and are therefore believed allowable for at least the same reasons. Because each dependent claim is also deemed to define an additional aspect of the invention, however, the individual consideration of each claim on its own merits is respectfully requested.

In view of the foregoing amendments and remarks, the entire application is believed to be in condition for allowance, and such action is respectfully requested at the Examiner's earliest convenience.

CONCLUSION

No claim fees are believed due; however, should it be determined that additional claim fees are required, the Director is hereby authorized to charge such fees to Deposit Account 06-1205.

Applicants' undersigned attorney may be reached in our Costa Mesa, CA office at (714) 540-8700. All correspondence should be directed to our address given below.

Respectfully submitted,

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